



Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

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EPIDEMIOLOGIC NOTES AND REPORTS
PROBABLE BOTULISM - Northwestern Ohio

On April 27, 1972, a 32-year-old man in northwestern Ohio experienced dizziness, headache, difficulty breathing, and difficulty swallowing solid foods. He was seen at the emergency room of a local hospital but was felt to be experiencing hysterical complaints and was advised to return home. Twelve hours later, he returned to the emergency room with marked difficulty breathing. He suffered a respiratory arrest, was successfully resuscitated, and was admitted to the intensive care unit. The patient remained apneic but alert until May 3, when he suffered a cardiac arrest. He was resuscitated but did not regain consciousness. On May 8, the diagnosis of botulism was considered, and the patient received five vials of trivalent botulism antitoxin over the next 3 days. He failed to respond, however, and died on May 16.

On April 29, the patient's 29-year-old wife vomited while visiting her husband at the hospital. The following day

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she awoke with dizziness, a heaviness of her head and neck, difficulty raising her eyelids, difficulty swallowing and speaking, and trouble breathing. She visited the emergency room of the same hospital, but was also felt to be experiencing hysterical complaints and was advised to return home. By May 1, her symptoms had become more severe, and she was admitted to the hospital. Positive findings on physical examination were restricted to sighing and irregular respirations; no specific mention of cranial nerve function was made. The patient experienced increasing difficulty breathing, and on

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	24th WEEK ENDING		MEDIAN 1967-1971	CUMULATIVE, FIRST 24 WEEKS		
	June 17, 1972	June 19, 1971		1972	1971	MEDIAN 1967-1971
Aseptic meningitis	44	58	58	883	1,139	755
Brucellosis	8	3	4	70	72	80
Chickenpox	3,267	---	---	101,343	---	---
Diphtheria	1	1	1	50	80	80
Encephalitis, primary:						
Arthropod-borne and unspecified	18	26	26	378	529	484
Encephalitis, post-infectious	7	11	8	133	164	219
Hepatitis, serum (Hepatitis B)	150	168	134	4,375	3,952	2,423
Hepatitis, infectious (Hepatitis A)	982	1,094	895	26,235	28,558	21,914
Malaria	9	50	42	570	1,683	1,202
Measles (rubeola)	800	2,111	1,241	23,473	61,175	34,440
Meningococcal infections, total	19	25	41	763	1,441	1,470
Civilian	19	24	39	730	1,263	1,322
Military	---	1	1	33	178	151
Mumps	1,339	2,585	---	49,533	88,299	---
Rubella (German measles)	504	1,089	1,644	18,353	33,599	37,756
Tetanus	3	4	3	43	45	53
Tuberculosis, new active	649	---	---	15,196	---	---
Tularemia	3	3	3	48	45	67
Typhoid fever	13	8	8	142	122	127
Typhus, tick-borne (Rky. Mt. spotted fever)	29	28	14	118	91	89
Venereal Diseases:†						
Gonorrhea	16,411	11,783	---	317,679	280,863	---
Syphilis, primary and secondary	501	436	---	11,100	10,737	---
Rabies in animals	77	76	64	2,054	2,142	1,772

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	---	Poliomyelitis, total:	5
Botulism:	---	Paralytic:	5
Congenital rubella syndrome: *	17	Psittacosis:	14
Leprosy: Calif. - 1, Tex. - 1, Va. - 1	49	Rabies in man:	1
Leptospirosis:	8	Trichinosis: NYC - 1	39
Plague:	1	Typhus, murine:	8

*Delayed report: Congenital rubella syndrome: Wis. 1

†Numbers for 1971 are estimated from quarterly reports to the Venereal Disease Branch, CDC

BOTULISM — Continued

the morning of May 3, she was found dead in bed.

On April 27, the 56-year-old uncle of the first patient had onset of nausea, vomiting, diarrhea, blurred vision, and difficulty swallowing solid foods. Over the next 2 days, difficulty speaking, double vision, dry mouth, dizziness, and severe constipation developed, and he was hospitalized. During his first week in the hospital, the patient's condition remained stable. The diagnosis of botulism was considered on May 9, and he received one vial of trivalent botulism antitoxin and an additional vial the next day. His symptoms and signs gradually improved over the ensuing week.

Blood specimens were obtained on May 8 from both male patients. The uncle's serum was non-toxic to mice. The nephew's serum was toxic to mice, but was not specifically neutralized by botulism antitoxin.

The three patients had shared no meals in common in the month preceding their illnesses. However, the uncle had visited the home of the first two patients on April 22 and had shared a meal with other persons who lived there. The meal consisted of hamburger, commercially canned corn, rice, and home-canned pickled peppers. All 12 persons at the meal ate meat, rice, and corn, but only the uncle and another nephew ate any peppers. The uncle ate one whole pepper; the nephew tasted a small portion of one and subsequently experienced constipation and intermittent visual blurring for about 3 days. None of the other members of the household became ill. The first two patients had returned home the night of April 22 and reportedly ate some of the remaining peppers over the next 5 days.

The peppers had been home-canned by a friend of the family in July 1971. Of the original 12 jars, six had been consumed without ill effect. The remaining contents of the suspect jar were not available for laboratory study. The other five unopened jars were analyzed, and no botulinum toxin was found.

(Reported by George D. Ludwig, M.D., Professor and Chairman, Roberto Franco, M.D., Assistant Professor, Department of Medicine, Hospital of the Medical College of Ohio; Robert N. Baker, D.V.M., Chief, Consumer Health Protection, Toledo City Health Department; Robert Bowman, Chief Sanitarian, Lucas County Health Department, Ohio; Ralph Masterson, D.V.M., Chief, Epidemiology Section, Communicable Disease Division, Ohio Department of Health; Roger E. Kline, Inspector, John Feldman, Acting Deputy Regional Food and Drug Director, Food and Drug Administration; the Enterobacteriology Unit, Laboratory Division, and the Bacterial Diseases Branch, Epidemiology Program, CDC.)

Editorial Note

Botulism should be suspected in persons presenting with symmetrical descending bulbar and skeletal muscle paralysis without sensory component or fever. Impairment of voice and vision are especially important in the clinical evaluation.

Although botulinum toxin was not specifically identified in any of the specimens examined, the clinical and epidemiologic features of this outbreak strongly suggest botulism. The negative and equivocal laboratory findings may have been because the patients' specimens were obtained late in the course of illness. It is not unusual for only one container in a given lot to be contaminated with botulinum toxin.

POWASSAN ENCEPHALITIS — New York

On July 30, 1971, a 7-year-old boy was admitted to a hospital in Albany, New York, after having had three generalized seizures. Physical examination revealed blood pressure 104/68, pulse 132/minute, respiratory rate 24/minute, and temperature 101°F. The patient was stuporous on admission. The only physical abnormalities were bulging erythematous tympanic membranes and hypoactive deep tendon reflexes.

On August 1, he was noted to have meningismus. The patient remained lethargic but had no further seizures. An electroencephalogram (EEG) on August 3 was markedly abnormal with generalized high amplitude slowing in the 1-1½ cycles-per-second frequency range. His rectal temperature remained elevated to 103-104°F. until August 4 when a hypothermic blanket was used. On August 10, he became afebrile and started to respond to vocal stimulation. An EEG on August 19 was still grossly abnormal, with no significant change from that on August 3. The patient was discharged on August 20. A follow-up EEG on December 17 showed no definite abnormalities.

No pathogenic agents were isolated from throat and rectal swabs taken on August 5. Cerebrospinal fluid (CSF) taken on July 30 was negative for infectious agents; however, ECHO virus type 6 was isolated from a CSF specimen obtained on August 6. Hemagglutination-inhibition and complement fixation tests were performed on three serum samples using the following antigens: Eastern Equine Encephalomyelitis, Western Equine Encephalomyelitis, St. Louis Encephalitis, Powassan (POW), Cache Valley, and California Encephalitis. The sera reacted only with POW antigen. Neutralizing tests for POW antibodies were subsequently performed. The results indicated active infection with POW virus (Table 1).

Although serologic tests using ECHO virus antigens were all negative, the isolation of ECHO virus type 6 from the CSF suggests that the patient may have experienced simultaneous or closely-spaced infections with POW and ECHO 6 viruses.

Eight days prior to his hospitalization, the patient had been bitten on the neck by a tick. There was no history of head trauma or epilepsy.

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Table 1
Serologic Test Results for Powassan Virus
Albany, New York — 1971

	Date Specimen Collected		
	7-29-71	8-4-71	9-10-71
Complement Fixation	4	Not Tested	16
Hemagglutination Inhibition	Not Tested	20	80
Log ₁₀ Neutralization Inhibition	Not Tested	3.2	5.2

Editorial Note

Powassan virus was first isolated in 1958 from a fatal human case in Ontario, Canada (1). This case of POW encephalitis is the third recorded in North America and the first in New York. POW virus is a member of the tick-borne encephalitis complex (Russian Spring-Summer Complex) of Group B

arbovirus (2).

References

1. McLean DM, Donohue WL: Powassan virus. Isolation of virus from a fatal case of encephalitis. *Can Med Assoc J* 80:708-711, 1959
2. Casals J: Antigenic relationship between Powassan and Russian Spring-Summer encephalitis viruses. *Can Med Assoc J* 82:355-358, 1960

**RECOMMENDATION OF THE PUBLIC HEALTH SERVICE
ADVISORY COMMITTEE ON IMMUNIZATION PRACTICES**

INFLUENZA VACCINE

INTRODUCTION

Influenza occurs in the United States every year, but the incidence and geographic extent vary widely. Periodically, it appears in epidemic form as a result of antigenic variation in prevalent viruses and the relative susceptibility of the population. Both type A and type B influenza viruses undergo antigen changes. Such changes usually occur slowly, but occasionally they are rapid and abrupt. Epidemics caused by type A influenza viruses occur more frequently and are generally more severe than those caused by type B.

The effectiveness of inactivated influenza vaccines* has been variable, and protection has been relatively brief. This has contributed to recommendations only for selective use in persons at high-risk. Vaccine for 1972-73 has more antigen than prior products and should give better results. It should be given to chronically ill patients and possibly to older persons in general. These two groups appear to be more vulnerable than others to serious cases of influenza and its complications. Because some influenza occurs each year, annual immunization of "high risk" patients is indicated as a routine procedure regardless of the amount of influenza expected in any specific geographic area.

INFLUENZA VIRUS VACCINES

The Division of Biologics Standards reviews influenza vaccine formulation regularly and recommends reformulation, when indicated, to include contemporary antigens. The influenza vaccine this year is different from that available in 1971-72. Although the type A strain present in 1971-72 is retained, its potency has been increased from 400 to 700 chick cell agglutinating (CCA) units. A more current type B strain replaces that in the 1971-72 formulation. Each adult dose of 1972-73 vaccine contains a total of 700 CCA units type A [A/Aichi/2/68(H3N2)]** and 300 CCA units type B (B/Massachusetts/1/72). Doses for children are specified in the manufacturers' package labeling. Vaccines from all producers are of the highly purified variety and should be less often associated with adverse reactions than the previous influenza vaccines.

VACCINE USAGE**General Recommendations**

Annual vaccination is recommended for persons of all ages who have chronic debilitating conditions: 1) congenital and rheumatic heart disease, especially with mitral stenosis, and arteriosclerotic and hypertensive heart disease, particularly with cardiac insufficiency; 2) chronic bronchopulmonary dis-

eases, such as asthma, chronic bronchitis, cystic fibrosis, bronchiectasis, emphysema, and advanced tuberculosis; 3) diabetes mellitus and other chronic metabolic disorders.

Although the value of routinely immunizing all older age persons is less clear, those patients who have incipient or potentially chronic disease, particularly affecting cardiovascular and bronchopulmonary systems, should also be considered for annual immunization.

Immunizations of persons who provide essential community services may also be considered if local priorities justify. However, before undertaking such programs, responsible physicians must take into account a number of reasonable constraints: difficulties inherent in predicting influenza epidemics, variability of vaccine effectiveness, incidence of adverse side effects, cost, availability of vaccine, and risk of diverting vaccine from those with chronic debilitating conditions who are at risk.

Schedule

The primary series consists of 2 doses administered subcutaneously, preferably 6-8 weeks apart. (Dose volume for adults and a detailed schedule for children are specified in the manufacturers' labeling.) Persons who have had 1 or more doses of vaccine containing the Hong Kong strain antigen (all influenza vaccines since 1968-69) need only a single subcutaneous booster dose of bivalent vaccine. All others should receive the full primary series. Vaccination should be scheduled for completion by mid-November.

Precautions

Influenza vaccine is prepared from viruses grown in embryonated eggs and ordinarily should not be administered to persons clearly hypersensitive to egg protein, ingested or injected.

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*The official name of the currently available product is Influenza Virus Vaccine, Bivalent.

**The World Health Organization has recommended a revised system of nomenclature for type A influenza viruses which includes their strain designation and a description of the two surface antigens, hemagglutinin (H) and neuraminidase (N).

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JUNE 17, 1972 AND JUNE 19, 1971 (24th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1972	1971			1972	1972
UNITED STATES	44	8	3,267	1	50	18	26	7	150	982	1,094
NEW ENGLAND	-	-	832	-	-	4	1	-	3	65	48
Maine*	-	-	-	-	-	-	-	-	-	2	5
New Hampshire*	-	-	6	-	-	-	-	-	-	10	2
Vermont	-	-	11	-	-	-	-	-	-	3	6
Massachusetts	-	-	294	-	-	4	-	-	-	41	9
Rhode Island	-	-	89	-	-	-	1	-	2	1	13
Connecticut	-	-	432	-	-	-	-	-	1	8	13
MIDDLE ATLANTIC	2	-	329	-	1	3	1	2	56	116	244
Upstate New York	-	-	3	-	1	1	-	1	2	21	26
New York City	-	-	255	-	-	-	-	-	16	33	89
New Jersey*	2	-	NN	-	-	-	1	-	32	42	63
Pennsylvania	-	-	71	-	-	2	-	1	6	20	66
EAST NORTH CENTRAL	-	1	1,467	-	3	1	13	-	20	128	148
Ohio	-	1	93	-	-	-	5	-	6	26	41
Indiana	-	-	133	-	-	-	2	-	-	14	4
Illinois	-	-	219	-	2	-	1	-	5	48	24
Michigan	-	-	465	-	1	1	4	-	8	38	70
Wisconsin	-	-	557	-	-	-	1	-	1	2	9
WEST NORTH CENTRAL	-	2	46	-	9	-	-	1	3	48	54
Minnesota	-	-	-	-	-	-	-	-	-	4	11
Iowa	-	2	32	-	-	-	-	-	1	4	2
Missouri	-	-	9	-	-	-	-	-	-	27	23
North Dakota	-	-	1	-	-	-	-	-	-	2	-
South Dakota	-	-	4	-	6	-	-	-	-	1	2
Nebraska	-	-	-	-	3	-	-	-	-	2	6
Kansas	-	-	-	-	-	-	-	1	2	8	10
SOUTH ATLANTIC	7	4	114	-	9	3	8	-	26	134	157
Delaware	-	-	9	-	-	-	-	-	-	1	4
Maryland	-	-	47	-	1	-	-	-	1	12	15
District of Columbia	-	-	14	-	-	-	-	-	-	3	2
Virginia	-	2	26	-	-	2	3	-	5	14	33
West Virginia*	---	---	---	---	---	---	---	---	---	---	5
North Carolina	-	-	NN	-	-	1	3	-	5	36	42
South Carolina	2	-	17	-	1	-	-	-	-	7	5
Georgia	-	2	1	-	2	-	-	-	-	16	3
Florida	5	-	-	-	5	-	2	-	15	45	48
EAST SOUTH CENTRAL	2	-	50	-	1	5	-	1	3	80	43
Kentucky	-	-	47	-	-	1	-	-	-	31	18
Tennessee	1	-	NN	-	-	1	-	1	-	32	14
Alabama	1	-	3	-	1	3	-	-	3	12	9
Mississippi	-	-	-	-	-	-	-	-	-	5	2
WEST SOUTH CENTRAL	15	-	9	-	21	-	-	1	1	94	149
Arkansas	-	-	-	-	-	-	-	-	-	3	16
Louisiana	5	-	NN	-	4	-	-	1	-	3	14
Oklahoma	-	-	1	-	-	-	-	-	1	19	19
Texas	10	-	8	-	17	-	-	-	-	69	100
MOUNTAIN	1	-	221	-	5	-	-	-	1	49	43
Montana	-	-	31	-	-	-	-	-	-	4	2
Idaho	-	-	-	-	2	-	-	-	-	1	5
Wyoming	-	-	1	-	-	-	-	-	-	1	-
Colorado	-	-	34	-	-	-	-	-	-	2	17
New Mexico	-	-	42	-	1	-	-	-	-	10	6
Arizona*	1	-	105	-	2	-	-	-	-	9	8
Utah	-	-	8	-	-	-	-	-	1	9	5
Nevada	-	-	-	-	-	-	-	-	-	13	-
PACIFIC	17	1	199	1	1	2	3	2	37	268	208
Washington	-	-	198	1	1	-	-	-	2	26	31
Oregon	2	-	1	-	-	-	-	-	1	21	27
California	15	1	-	-	-	1	3	2	34	213	142
Alaska*	-	-	-	-	-	1	-	-	-	2	-
Hawaii	-	-	-	-	-	-	-	-	-	6	8
Guam	-	-	16	-	-	-	---	-	-	6	---
Puerto Rico	-	-	40	-	-	-	-	-	1	20	16
Virgin Islands*	-	-	3	-	-	-	-	-	-	-	-

*Delayed reports: Aseptic meningitis: Ariz. delete 1

Chickenpox: Me. 49, N.H. 5, Ariz. 2, Alaska delete 43, V.I. 15

Encephalitis, primary: N.J. 1

Hepatitis B: Me. 1

Hepatitis A: Me. 2, N.H. delete 1, W. Va. delete 1, Ariz. 1, V.I. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JUNE 17, 1972 AND JUNE 19, 1971 (24th WEEK) - Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1972	Cum. 1972	1972	Cumulative		1972	Cumulative		1972	Cum. 1972	1972	Cum. 1972
				1972	1971		1972	1971				
UNITED STATES	9	570	800	23,473	61,175	19	763	1,441	1,339	49,533	504	18,353
NEW ENGLAND	-	13	117	2,505	3,025	1	33	65	90	2,069	22	847
Maine . *	-	-	-	221	1,381	-	3	7	5	227	1	62
New Hampshire	-	3	11	206	176	-	2	10	4	163	-	31
Vermont	-	-	5	103	100	-	-	-	1	98	1	64
Massachusetts*	-	5	51	481	205	1	17	26	14	509	5	407
Rhode Island	-	-	13	486	210	-	9	2	7	338	4	76
Connecticut	-	5	37	1,008	953	-	2	20	59	734	11	207
MIDDLE ATLANTIC	2	42	16	820	6,671	1	92	187	108	2,404	19	1,606
Upstate New York	-	7	4	112	487	-	22	47	NN	NN	9	193
New York City	-	6	8	194	3,351	-	27	39	69	1,184	4	161
New Jersey *	1	13	2	465	1,080	1	20	46	30	627	5	1,011
Pennsylvania	1	16	2	49	1,753	-	23	55	9	593	1	241
EAST NORTH CENTRAL	1	54	342	9,557	13,194	1	101	155	363	13,703	128	4,957
Ohio	1	8	2	217	3,520	1	36	44	35	1,933	18	353
Indiana	-	1	21	1,145	2,422	-	10	11	18	872	13	555
Illinois	-	19	118	3,537	2,614	-	24	46	53	2,465	27	919
Michigan	-	24	58	1,665	1,805	-	27	44	66	2,388	32	1,153
Wisconsin	-	2	143	2,993	2,833	-	4	10	191	6,045	38	1,977
WEST NORTH CENTRAL	-	39	3	897	5,986	-	60	118	27	7,997	6	1,219
Minnesota	-	4	-	16	51	-	13	19	3	656	3	473
Iowa	-	3	3	637	2,188	-	2	7	10	5,600	1	373
Missouri	-	10	-	153	2,227	-	18	43	11	406	2	99
North Dakota	-	1	-	48	205	-	-	5	1	291	-	21
South Dakota	-	4	-	4	198	-	2	5	2	109	-	12
Nebraska	-	3	-	18	58	-	9	14	-	237	-	50
Kansas	-	14	-	21	1,059	-	16	25	-	698	-	191
SOUTH ATLANTIC	-	79	36	1,886	6,348	9	173	236	94	4,321	20	1,301
Delaware	-	-	3	38	33	-	1	2	3	60	-	6
Maryland	-	2	1	14	432	3	31	35	16	236	-	38
District of Columbia	-	1	-	2	12	-	7	8	3	13	1	5
Virginia	-	3	-	55	1,084	4	42	19	24	773	-	60
West Virginia	---	1	---	210	429	---	6	5	---	2,113	---	342
North Carolina	-	33	-	28	1,832	1	24	38	NN	NN	2	22
South Carolina *	-	10	1	207	846	-	14	19	-	146	-	48
Georgia	-	19	-	135	183	-	3	21	-	2	2	36
Florida	-	10	31	1,197	1,497	1	45	89	48	978	15	744
EAST SOUTH CENTRAL	-	157	5	967	7,753	1	60	130	63	2,563	63	1,381
Kentucky	-	138	4	484	3,727	-	20	37	13	404	39	801
Tennessee	-	-	-	183	930	-	22	48	42	1,608	8	439
Alabama	-	15	-	127	1,720	1	12	26	1	445	2	37
Mississippi	-	4	1	173	1,376	-	6	19	7	106	14	104
WEST SOUTH CENTRAL	-	63	30	1,286	11,770	2	93	125	164	4,075	88	1,305
Arkansas	-	4	-	12	760	-	8	5	1	153	-	27
Louisiana *	-	4	-	79	1,602	1	28	43	8	240	-	81
Oklahoma	-	3	-	9	736	-	6	6	-	153	-	32
Texas	-	52	30	1,186	8,672	1	51	71	155	3,529	88	1,165
MOUNTAIN	-	39	60	1,629	2,869	-	13	44	86	2,583	27	977
Montana	-	2	-	12	901	-	2	3	-	149	-	28
Idaho	-	3	1	18	233	-	3	6	2	185	-	22
Wyoming	-	1	-	45	83	-	1	2	1	218	1	8
Colorado	-	26	14	484	774	-	2	7	25	688	6	505
New Mexico	-	1	3	101	278	-	1	3	20	512	-	78
Arizona *	-	5	42	817	336	-	1	8	31	679	16	310
Utah	-	1	-	152	261	-	2	12	7	107	4	23
Nevada	-	-	-	-	3	-	1	3	-	45	-	3
PACIFIC	6	84	191	3,926	3,559	4	138	381	344	9,818	131	4,760
Washington	-	-	50	933	847	-	11	18	48	3,433	11	806
Oregon	1	9	13	57	329	-	11	27	44	1,227	5	315
California	5	64	128	2,837	2,116	4	108	331	250	4,907	115	3,576
Alaska *	-	2	-	11	51	-	5	-	-	94	-	17
Hawaii	-	9	-	88	216	-	3	5	2	157	-	46
Guam	-	2	-	2	---	-	11	---	-	2	-	5
Puerto Rico	-	3	41	473	311	-	4	2	51	569	-	12
Virgin Islands *	-	-	-	1	8	-	2	-	-	123	-	3

*Delayed reports: Measles: Me. 2, Mass. delete 1, Ariz. 17, Alaska 6
Mumps: Me. 1, S.C. 2, La. delete 1, Ariz. 3, V.I. 6
Meningococcal infections: N.J. delete 1
Rubella: Me. 2, Ariz. 3, Alaska 2

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JUNE 17, 1972 AND JUNE 19, 1971 (24th WEEK) - Continued

AREA	TETANUS	TB (New Active)	TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	1972	1972	1972	Cum. 1972	1972	Cum. 1972	1972	Cum. 1972	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1972	Cum. 1972
									1972	1972		
UNITED STATES	3	649	3	48	13	142	29	118	16,411	501	77	2,054
NEW ENGLAND	-	26	-	-	1	6	-	-	520	4	2	71
Maine	-	1	-	-	-	-	-	-	21	-	-	57
New Hampshire*	-	1	-	-	1	1	-	-	14	-	-	1
Vermont	-	1	-	-	-	-	-	-	18	-	-	8
Massachusetts	-	13	-	-	-	3	-	-	303	-	2	2
Rhode Island	-	6	-	-	-	-	-	-	29	1	-	1
Connecticut	-	4	-	-	-	2	-	-	135	3	-	2
MIDDLE ATLANTIC	-	151	-	1	1	29	6	9	2,347	105	4	47
Upstate New York	-	35	-	-	-	9	3	3	506	8	3	20
New York City	-	56	-	-	1	16	-	-	1,181	79	-	-
New Jersey	-	20	-	1	-	3	1	2	278	17	-	-
Pennsylvania	-	40	-	-	-	1	2	4	382	1	1	27
EAST NORTH CENTRAL	1	79	-	1	-	12	2	6	1,575	19	9	219
Ohio*	-	28	-	1	-	5	2	6	677	4	2	70
Indiana	-	6	-	-	-	-	-	-	182	1	2	52
Illinois	1	-	-	-	-	2	-	-	62	6	1	38
Michigan	-	34	-	-	-	4	-	-	543	7	-	3
Wisconsin	-	11	-	-	-	1	-	-	111	1	4	56
WEST NORTH CENTRAL	-	28	2	10	-	4	1	2	947	8	22	496
Minnesota	-	10	-	-	-	-	-	-	160	-	-	119
Iowa	-	1	-	-	-	-	-	-	126	2	15	156
Missouri	-	6	2	10	-	3	1	1	260	2	1	46
North Dakota	-	-	-	-	-	-	-	-	11	-	3	77
South Dakota	-	4	-	-	-	-	-	-	22	-	-	31
Nebraska	-	3	-	-	-	-	-	-	104	2	-	8
Kansas	-	4	-	-	-	1	-	1	264	2	3	59
SOUTH ATLANTIC	1	97	-	6	1	18	14	69	5,235	196	5	177
Delaware	-	-	-	-	-	-	-	-	56	-	-	-
Maryland	-	13	-	-	-	2	1	13	304	13	-	5
District of Columbia	-	-	-	-	-	2	-	-	207	19	-	-
Virginia	-	15	-	4	-	6	2	17	359	41	1	50
West Virginia	-	-	-	-	-	1	-	-	-	-	-	37
North Carolina*	-	14	-	-	-	-	11	29	443	7	-	-
South Carolina*	1	-	-	-	-	1	-	6	1,505	12	-	8
Georgia	-	29	-	1	1	1	-	4	1,518	70	3	45
Florida	-	26	-	1	-	5	-	-	843	34	1	32
EAST SOUTH CENTRAL	-	60	-	3	-	12	4	14	1,273	24	12	436
Kentucky	-	24	-	-	-	4	-	-	139	4	7	164
Tennessee	-	19	-	2	-	3	4	13	457	11	5	227
Alabama	-	9	-	1	-	-	-	1	382	-	-	44
Mississippi	-	8	-	-	-	5	-	-	295	9	-	1
WEST SOUTH CENTRAL	1	61	1	24	5	19	2	18	1,645	50	17	448
Arkansas	-	8	-	15	-	6	-	3	104	1	1	63
Louisiana*	1	21	-	1	1	4	-	-	333	25	-	20
Oklahoma	-	10	1	5	-	1	2	13	147	4	10	195
Texas	-	22	-	3	4	8	-	2	1,061	20	6	170
MOUNTAIN	-	35	-	2	-	3	-	-	588	11	1	33
Montana	-	-	-	-	-	-	-	-	15	-	-	-
Idaho	-	1	-	-	-	-	-	-	53	-	-	-
Wyoming	-	2	-	-	-	-	-	-	3	-	-	-
Colorado	-	5	-	1	-	-	-	-	129	4	-	-
New Mexico	-	14	-	-	-	1	-	-	148	2	-	6
Arizona*	-	13	-	1	-	1	-	-	140	2	1	27
Utah	-	-	-	-	-	1	-	-	27	2	-	-
Nevada	-	-	-	-	-	-	-	-	73	1	-	-
PACIFIC	-	112	-	1	5	39	-	-	2,281	84	5	127
Washington	-	3	-	-	-	2	-	-	224	2	-	-
Oregon	-	12	-	-	-	-	-	-	114	2	-	-
California	-	94	-	-	5	34	-	-	1,860	77	4	120
Alaska	-	-	-	1	-	-	-	-	43	1	1	7
Hawaii	-	3	-	-	-	3	-	-	40	2	-	-
Guam	-	2	-	-	-	-	-	-	8	-	-	-
Puerto Rico	-	11	-	-	-	4	-	-	29	33	1	30
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-	-

*Delayed reports: Tuberculosis: Ohio delete 3, N.C. delete 1, Ariz. delete 1
Gonorrhoea: N.H. 2, N.C. 200, La. delete 6
Rabies in animals: S.C. 8, Ariz. 1

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TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING JUNE 17, 1972

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	604	364	24	38	SOUTH ATLANTIC	1,185	611	56	36
Boston, Mass.	180	99	13	13	Atlanta, Ga.	159	64	9	2
Bridgeport, Conn.	32	23	1	4	Baltimore, Md.	244	121	16	3
Cambridge, Mass.	29	22	—	8	Charlotte, N. C.	52	23	1	—
Fall River, Mass.	25	14	1	—	Jacksonville, Fla.	92	49	9	2
Hartford, Conn.	52	26	2	—	Miami, Fla.	103	61	3	4
Lowell, Mass.	22	17	—	3	Norfolk, Va.	60	30	1	4
Lynn, Mass.	23	15	1	1	Richmond, Va.	81	37	3	2
New Bedford, Mass.	15	10	—	—	Savannah, Ga.	37	23	—	3
New Haven, Conn.	40	18	2	2	St. Petersburg, Fla.	100	79	3	2
Providence, R. I.	44	26	—	2	Tampa, Fla.	87	45	—	9
Somerville, Mass.	7	6	—	—	Washington, D. C.	122	54	11	5
Springfield, Mass.	54	33	1	3	Wilmington, Del.	48	25	—	—
Waterbury, Conn.	27	20	—	—	EAST SOUTH CENTRAL	696	375	35	25
Worcester, Mass.	54	35	3	2	Birmingham, Ala.	102	56	—	2
MIDDLE ATLANTIC	2,923	1,637	126	108	Chattanooga, Tenn.	50	28	1	6
Albany, N. Y.	35	16	4	—	Knoxville, Tenn.	34	25	2	2
Allentown, Pa.	17	12	—	4	Louisville, Ky.	125	70	5	2
Buffalo, N. Y.	159	93	2	5	Memphis, Tenn.	154	77	16	1
Camden, N. J.	37	21	3	2	Mobile, Ala.	61	31	5	2
Elizabeth, N. J.	33	20	—	1	Montgomery, Ala.	49	30	1	4
Erie, Pa.	56	32	1	4	Nashville, Tenn.	121	58	5	6
Jersey City, N. J.	67	33	3	5	WEST SOUTH CENTRAL	1,234	611	83	25
Newark, N. J.	57	30	—	5	Austin, Tex.	48	30	2	1
New York City, N. Y.**	1,473	830	56	52	Baton Rouge, La.	36	15	4	1
Paterson, N. J.	48	27	1	1	Corpus Christi, Tex.	32	12	3	—
Philadelphia, Pa.	397	222	24	4	Dallas, Tex.	163	60	21	5
Pittsburgh, Pa.	168	85	8	7	El Paso, Tex.	59	31	8	2
Reading, Pa.	44	29	1	2	Fort Worth, Tex.	89	51	6	2
Rochester, N. Y.	116	60	9	6	Houston, Tex.	230	99	8	2
Schenectady, N. Y.	22	13	—	—	Little Rock, Ark.	54	33	2	—
Scranton, Pa.	30	19	4	1	New Orleans, La.	161	90	8	1
Syracuse, N. Y.	67	38	4	2	Oklahoma City, Okla.**	88	47	6	1
Trenton, N. J.	39	22	4	1	San Antonio, Tex.	128	66	5	3
Utica, N. Y.	24	17	—	2	Shreveport, La.	57	31	5	3
Yonkers, N. Y.	34	18	2	4	Tulsa, Okla.	89	46	5	4
EAST NORTH CENTRAL	2,471	1,386	120	61	MOUNTAIN	477	257	33	19
Akron, Ohio	64	32	2	—	Albuquerque, N. Mex.	66	32	5	5
Canton, Ohio	35	20	2	3	Colorado Springs, Colo.	29	17	1	3
Chicago, Ill.	666	352	35	14	Denver, Colo.	128	70	8	5
Cincinnati, Ohio	151	99	8	5	Ogden, Utah	19	10	1	1
Cleveland, Ohio	189	97	7	2	Phoenix, Ariz.	109	59	9	—
Columbus, Ohio	136	78	6	3	Pueblo, Colo.	21	12	1	3
Dayton, Ohio	123	78	4	5	Salt Lake City, Utah	39	18	6	2
Detroit, Mich.	345	175	25	7	Tucson, Ariz.	66	39	2	—
Evansville, Ind.	44	33	—	1	PACIFIC	1,718	1,065	64	28
Flint, Mich. **	49	26	4	1	Berkeley, Calif.	19	10	—	—
Fort Wayne, Ind.	45	24	3	1	Fresno, Calif.	56	33	3	1
Gary, Ind.	9	4	1	1	Glendale, Calif.	44	29	—	—
Grand Rapids, Mich.	49	32	3	4	Honolulu, Hawaii	51	27	6	1
Indianapolis, Ind.	136	68	7	3	Long Beach, Calif.	111	71	1	1
Madison, Wis.	26	14	1	1	Los Angeles, Calif.	597	394	17	9
Milwaukee, Wis.	134	89	3	5	Oakland, Calif.	62	40	1	—
Peoria, Ill.	32	19	3	—	Pasadena, Calif.	33	24	2	—
Rockford, Ill.	42	21	—	—	Portland, Oreg.	131	86	3	3
South Bend, Ind.	42	34	—	4	Sacramento, Calif.	54	25	4	—
Toledo, Ohio	89	50	3	—	San Diego, Calif.	132	71	8	2
Youngstown, Ohio	65	41	3	1	San Francisco, Calif.	175	102	5	5
WEST NORTH CENTRAL	826	505	48	22	San Jose, Calif.	42	31	2	3
Des Moines, Iowa	69	47	2	—	Seattle, Wash.	124	74	8	—
Duluth, Minn.	13	11	—	3	Spokane, Wash.	47	28	2	3
Kansas City, Kans.	30	11	1	1	Tacoma, Wash.	40	20	2	—
Kansas City, Mo.	125	88	8	4	Total	12,134	6,811	589	362
Lincoln, Nebr.	24	16	—	3	Expected Number	12,514	7,098	562	421
Minneapolis, Minn.	93	57	4	—	Cumulative Total				
Omaha, Nebr.	105	66	6	1	(includes reported corrections				
St. Louis, Mo.	217	124	18	3	for previous weeks)	314,498	184,110	12,273	13,714
St. Paul, Minn.	87	55	5	5					
Wichita, Kans.	63	30	4	2					
Las Vegas, Nev.*	11	3	—	—					

*Mortality data are being collected from Las Vegas, Nev., for possible inclusion in this table, however, for statistical reasons, these data will be listed only and not included in the total, expected number, or cumulative total, until 5 years of data are collected.

**Estimate based on average percent of divisional total.

EPIDEMIOLOGIC NOTES AND REPORTS
TYPHOID FEVER — Georgia

On June 12, 1972, a 48-year-old woman from Dalton, Georgia, was referred to a hospital in Atlanta, Georgia, with a suspected diagnosis of salmonellosis complicated by a heart condition. She had a 4-day history of diarrhea, headache, and fever to 105°F. On admission, physical examination revealed a palpable spleen and liver tenderness. The white blood cell count ranged from 4,000 to 6,000. Several blood cultures grew *Salmonella typhi*, which was resistant to chloramphenicol, tetracycline, streptomycin, and sulfathiazole. The Widal test revealed an O titer of 1:40 and an H titer of 1:160. On June 13, the patient was started on intravenous and oral ampicillin; however, she is still febrile.

Approximately 3 weeks prior to her hospitalization, the patient experienced a diarrheal illness while visiting Mexico City. She was treated with Lomotil and a liquid antibiotic. About 3 years prior to admission, she had cardiac surgery for the replacement of her mitral valve with a prosthetic valve. Her present illness may be complicated by *S. typhi* endocarditis affecting the prosthetic valve.

(Reported by the Witfield County Health Department,

Dalton, Georgia; Dwight W. Lambe, Jr., Ph.D., Chief, Microbiology Section, Clinical Pathology Laboratory, Margaret M. Martin, R.N., Surveillance Officer, Edward R. Dorney, M.D., clinic physician, Jo Ann Mertz, MT (ASCP), Supervisor, Microbiology Laboratory, Sue B. Overman, M.S., Associate in Pathology, Emory University Hospital, Atlanta; and John E. McCroan, Ph.D., State Epidemiologist, Georgia Division of Physical Health.)

Editorial Note

This is the fourth reported case of typhoid fever in travelers from the United States to Mexico and the third one due to the multiply-resistant strain of *S. typhi* associated with the outbreak in central Mexico (MMWR, Vol. 21, Nos. 21 and 23).

ERRATUM, Vol. 21, No. 21, p. 178:

In the article "Typhoid Fever — Mexico," correct the third sentence in the Editorial Note to read: This is the first report of an epidemic caused by a naturally occurring chloramphenicol-resistant strain of *S. typhi*.

INTERNATIONAL NOTES
QUARANTINE MEASURES

The following change should be made in the "Supplement — Vaccination Certificate Requirements for International Travel," MMWR, Vol. 20, No. 11:

Australia: In the note concerning cholera, delete: by air.

In the note concerning smallpox, insert: Canada, United States of America.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

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